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PATENT
Docket No. SJO920030066US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant: Joseph J. Fatula Jr.

Serial No.: 10/736,473

Filed: December 15, 2003

For: **APPARATUS, SYSTEM, AND METHOD FOR ON-
DEMAND CONTROL OF GRID SYSTEM
RESOURCES**

Examiner: Lin Liu

Group Art
Unit: 2145

APPEAL BRIEF

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Examiner:

The USPTO received Appellant's timely Notice of Appeal on April 30, 2008, which was filed in response to the Final Office Action mailed January 30, 2008 (hereinafter OA080130). Appellant appeals the rejection of pending claims 1-37.

This Brief is being filed under the provisions of 37 C.F.R. § 41.37. This Brief is timely as the Brief is being filed within two months of the filing of the notice of appeal. The filing fee set forth in 37 C.F.R. § 41.20(b)(2) of \$510.00 is submitted herewith. The Commissioner is hereby authorized to charge payment of any additional fees associated with this communication, or to credit any overpayment, to Deposit Account No. 09-0466.

1. REAL PARTY IN INTEREST

The real party in interest is the assignee, International Business Machines Corporation.

2. RELATED APPEALS AND INTERFERENCES

There are no related appeals, interferences, or judicial proceedings.

3. STATUS OF CLAIMS

The Office Action cites the following art: US Patent Application Publication 2005/0027863 by Talwar et al. (hereinafter Talwar); US Patent 6,460,082 to Lumelsky et al. (hereinafter Lumelsky); US Patent Application Publication 2004/0064480 by Bartlett et al. (hereinafter Bartlett).

Claims 1-37 are pending in the case. Claims 1, 14, 19, 22, 25, 26, and 37 are independent claims. The specification is objected to. Claims 26-36 are rejected under 35 USC § 101. Claims 1-5.0, 19, 22, 23, 26-28, 31-33 and 37 are rejected under 35 USC § 102(e) as anticipated by Talwar. Claims 6, 7, 12, 13, 20, 21, 24, 29, 30, 35, and 36 are rejected under 35 USC § 103(a) as unpatentable over the combination of Talwar and Lumelsky. Claims 11, 14, 15, 17, 18, and 34 are rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Talwar and Bartlett. Claims 16 and 25 are rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Talwar, Bartlett, and Lumelsky.

The claims remain rejected as set forth in the final rejection as noted in the Advisory Action of April 30, 2008 (hereinafter AA080430). Appellant appeals the rejection of claims 1-37.

4. STATUS OF AMENDMENTS

No proposed amendments are pending.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed subject matter deals with controlling a resource of a grid computing system. See published version of the application US Patent Publication No. 2005/0131898 (hereinafter '898) page 1, ¶ 11.

The problem addressed is managing resources that are dynamically available for a grid computer system. See '898, page 1, ¶ 9. The present invention improves the control and management of resources in a grid computer system. See '898, page 1, ¶ 11. Specifically, the claimed invention provides for a user inputting a parameter control request, the parameter control request corresponding to a performance parameter stored in a profile in a memory device of the grid computing system and dynamically changing the performance parameter in a resource according to the parameter control request. See '898, page 4, ¶ 44-46; page 5, ¶ 56-57. Embodiments of the present invention include apparatuses, a system, methods, and a computer readable medium.¹ See e.g. claims 1, 14, 19, 22, 25, 26 and 37.

Claim 1 presents a global on-demand management apparatus for user control of a system resource on a grid computing system ('898, page 4, ¶ 44; fig. 3, ref. 300). The apparatus includes a global user input module ('898, fig. 3, ref. 322) configured to allow a user to input a parameter control request ('898, page 5, ¶ 56; page 7, ¶ 83; fig. 8, ref. 806). The parameter control request corresponds to a performance parameter stored in a profile in a memory device of the grid computing system ('898, page 5, ¶ 54, 56).

The apparatus further includes a global parameter module ('898, fig. 3, ref. 324). The global parameter module dynamically changes the performance parameter according to the parameter control request ('898, page 5, ¶ 57; page 8, ¶ 86; fig. 8, ref. 814). The performance parameter corresponds to a performance resource ('898, page 5, ¶ 57). The apparatus also includes a global reservation module ('898, fig. 3, ref. 326) that reserves the performance resource for a grid computing operation ('898, page 5, ¶ 58; page 8, ¶ 86; fig. 8, ref. 814).

The following quotation of claim 1 includes reference numerals and parenthetical references to representative examples of the elements and components recited in claim 1 in compliance with 37 CFR 41.37(c)(1)(v).

¹ Although Appellant has summarized embodiments of the present invention, the present invention is defined by the claims themselves. Appellant's summary is not intended to limit the scope of the claims or individual claim elements in complying with the appeal brief requirements under 37 C.F.R. § 41.37(c)(v).

1 A global on-demand management apparatus for user control of a system resource on a grid computing system ('898, page 4, ¶ 44; fig. 3, ref. 300), the apparatus comprising:

a global user input module ('898, fig. 3, ref. 322) configured to allow a user to input a parameter control request ('898, page 5, ¶ 56; page 7, ¶ 83; fig. 8, ref. 806), the parameter control request corresponding to a performance parameter stored in a profile in a memory device of the grid computing system ('898, page 5, ¶ 54, 56);

a global parameter module ('898, fig. 3, ref. 324) configured to dynamically change the performance parameter according to the parameter control request ('898, page 5, ¶ 57; page 8, ¶ 86; fig. 8, ref. 814), the performance parameter corresponding to a performance resource ('898, page 5, ¶ 57); and

a global reservation module ('898, fig. 3, ref. 326) configured to reserve the performance resource for a grid computing operation ('898, page 5, ¶ 58; page 8, ¶ 86; fig. 8, ref. 814).

Claim 14 presents a local on-demand management apparatus for user control of a system resource on a grid computing system ('898, page 6, ¶ 63; fig. 4, ref. 412). The apparatus includes a client user input module ('898, page 6, ¶ 65; fig. 4, ref. 418) configured to allow a user to input a client parameter control request ('898, page 6, ¶ 65; page 7, ¶ 83; fig. 8, ref. 806). The parameter control request corresponding to a client performance parameter of the grid computing system, the client performance parameter corresponding to a client performance resource ('898, page 6, ¶ 65).

The apparatus also includes a client allocation module ('898, fig. 4, ref. 422) configured to allocate the client performance resource to the grid computing system ('898, page 6, ¶ 67). In addition, the apparatus includes a client profile management module ('898, fig. 4, ref. 426) configured to store a client profile in a memory device ('898, page 8, ref. 90; fig. 10, ref. 1006). The client profile comprises the client performance parameter of the client performance resource allocated to the grid computing system ('898, page 6, ¶ 65-66).

The apparatus also includes a client profile synchronization module ('898, fig. 4, ref. 428). The client profile synchronization module synchronizes the client performance parameter with one of a plurality of client profiles stored on a global on-demand apparatus ('898, page 6, ¶ 66).

The following quotation of claim 14 includes reference numerals and parenthetical references to representative examples of the elements and components recited in claim 14 in compliance with 37 CFR 41.37(c)(1)(v).

14 A local on-demand management apparatus for user control of a system resource on a grid computing system ('898, page 6, ¶ 63; fig. 4, ref. 412), the apparatus comprising:

- a client user input module ('898, page 6, ¶ 65; fig. 4, ref. 418) configured to allow a user to input a client parameter control request ('898, page 6, ¶ 65; page 7, ¶ 83; fig. 8, ref. 806), the parameter control request corresponding to a client performance parameter of the grid computing system, the client performance parameter corresponding to a client performance resource ('898, page 6, ¶ 65);

- a client allocation module ('898, fig. 4, ref. 422) configured to allocate the client performance resource to the grid computing system ('898, page 6, ¶ 67);

- a client profile management module ('898, fig. 4, ref. 426) configured to store a client profile in a memory device ('898, page 8, ref. 90; fig. 10, ref. 1006), the client profile comprising the client performance parameter of the client performance resource allocated to the grid computing system ('898, page 6, ¶ 65-66); and

- a client profile synchronization module ('898, fig. 4, ref. 428) configured to synchronize the client performance parameter with one of a plurality of client profiles stored on a global on-demand apparatus ('898, page 6, ¶ 66).

Claim 19 presents system for user control of a system resource on a grid computing system ('898, fig. 3, ref. 300; fig. 4, ref. 400). The system includes a local on-demand management apparatus connected to the grid computing system, the local on-demand apparatus having local access to and control of a performance resource ('898, page 6, ¶ 63; fig. 4, ref. 412).

The system further includes a global on-demand management apparatus connected to the grid computing system, the global on-demand apparatus configured to communicate with the local on-demand apparatus ('898, page 4, ¶ 44; fig. 3, ref. 300). In addition, the system includes a user input module ('898, fig. 3, ref. 324; fig. 4, ref. 418). The user input module allows a user to input a parameter control request, the parameter control request corresponding to the

performance resource ('898, page 5, ¶ 56; page 6, ¶ 65; page 7, ¶ 83; fig. 8, ref. 806). The performance resource corresponds to a performance parameter stored in a profile in a memory device of the grid computing system ('898, page 5, ¶ 54, 56).

The system also includes an allocation module ('898, fig. 4, ref. 422) that allocates the performance resource to the grid computing system ('898, page 6, ¶ 67). In addition, the system includes a reservation module ('898, fig. 3, ref. 326) configured to reserve the performance resource for a grid computing operation ('898, page 5, ¶ 58; page 8, ¶ 86; fig. 8, ref. 814).

The following quotation of claim 19 includes reference numerals and parenthetical references to representative examples of the elements and components recited in claim 19 in compliance with 37 CFR 41.37(c)(1)(v).

19 A system for user control of a system resource on a grid computing system ('898, fig. 3, ref. 300; fig. 4, ref. 400), the system comprising:

- a local on-demand management apparatus connected to the grid computing system, the local on-demand apparatus having local access to and control of a performance resource ('898, page 6, ¶ 63; fig. 4, ref. 412);

- a global on-demand management apparatus connected to the grid computing system, the global on-demand apparatus configured to communicate with the local on-demand apparatus ('898, page 4, ¶ 44; fig. 3, ref. 300);

- a user input module ('898, fig. 3, ref. 324; fig. 4, ref. 418) configured to allow a user to input a parameter control request, the parameter control request corresponding to the performance resource ('898, page 5, ¶ 56; page 6, ¶ 65; page 7, ¶ 83; fig. 8, ref. 806), wherein the performance resource corresponds to a performance parameter stored in a profile in a memory device of the grid computing system ('898, page 5, ¶ 54, 56);

- an allocation module ('898, fig. 4, ref. 422) configured to allocate the performance resource to the grid computing system ('898, page 6, ¶ 67); and

- a reservation module ('898, fig. 3, ref. 326) configured to reserve the performance resource for a grid computing operation ('898, page 5, ¶ 58; page 8, ¶ 86; fig. 8, ref. 814).

Claim 22 presents a method for user control of a system resource on a grid computing system. The method includes allowing a user to input a parameter control request ('898, page 5, ¶ 56; page 7, ¶ 83; fig. 8, ref. 806). The parameter control request corresponds to a performance parameter stored in a profile in a memory device of the grid computing system ('898, page 5, ¶ 54, 56).

The method also includes dynamically changing the performance parameter according to the parameter control request ('898, page 5, ¶ 57; page 8, ¶ 86; fig. 8, ref. 814). The performance parameter corresponds to a performance resource ('898, page 5, ¶ 57). In addition, the method includes reserving the performance resource for a grid computing operation ('898, page 5, ¶ 58; page 8, ¶ 86; fig. 8, ref. 814).

The following quotation of claim 22 includes reference numerals and parenthetical references to representative examples of the elements and components recited in claim 22 in compliance with 37 CFR 41.37(c)(1)(v).

22 A method for user control of a system resource on a grid computing system, the method comprising:

- allowing a user to input a parameter control request ('898, page 5, ¶ 56; page 7, ¶ 83; fig. 8, ref. 806), the parameter control request corresponding to a performance parameter stored in a profile in a memory device of the grid computing system ('898, page 5, ¶ 54, 56);

- dynamically changing the performance parameter according to the parameter control request ('898, page 5, ¶ 57; page 8, ¶ 86; fig. 8, ref. 814), the performance parameter corresponding to a performance resource ('898, page 5, ¶ 57); and

- reserving the performance resource for a grid computing operation ('898, page 5, ¶ 58; page 8, ¶ 86; fig. 8, ref. 814).

Claim 25 presents a method for user control of a system resource on a grid computing system that includes allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter of the grid computing system ('898, page 5, ¶

56; page 6, ¶ 65; page 7, ¶ 83; fig. 8, ref. 806). In addition, the method includes dynamically changing the performance parameter according to the parameter control request ('898, page 5, ¶ 57; page 8, ¶ 86; fig. 8, ref. 814). The performance parameter corresponds to a performance resource ('898, page 5, ¶ 57).

The method further includes reserving the performance resource for a grid computing operation ('898, page 5, ¶ 58; page 8, ¶ 86; fig. 8, ref. 814). In addition, the method includes terminating the reservation of the performance resource in response to a client reclamation operation ('898, page 7, ¶ 83; fig. 9, ref. 910). The client reclamation operation reclaims the performance resource and makes the performance resource unavailable to the grid computing system ('898, page 8, ¶ 88).

The method further includes reserving another performance resource for the grid computing operation, wherein the other performance resource similar to is the same type of performance resource as the reclaimed performance resource ('898, page 5, ¶ 58; page 8, ¶ 86; fig. 8, ref. 814). In addition, the method includes storing a network profile, the network profile comprising a network performance parameter of a network performance resource available to the grid computing system ('898, page 4, ¶ 46).

The method also includes storing a global client profile in a memory device, the global client profile descriptive of a global client performance resource parameter ('898, page 4, ¶ 46, 49). In addition, the method includes storing a plurality of client profiles, each of the plurality of client profiles comprising a client performance parameter of a client performance resource available to the grid computing system ('898, page 4, ¶ 46; page 5, ¶ 54). The method further includes synchronizing one of the stored client profiles with a local client profile stored on a client ('898, page 5, ¶ 59).

The following quotation of claim 25 includes reference numerals and parenthetical references to representative examples of the elements and components recited in claim 25 in compliance with 37 CFR 41.37(c)(1)(v).

25 A method for user control of a system resource on a grid computing system, the method comprising:

allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter of the grid computing system ('898, page 5, ¶ 56; page 6, ¶ 65; page 7, ¶ 83; fig. 8, ref. 806);

dynamically changing the performance parameter according to the parameter control request ('898, page 5, ¶ 57; page 8, ¶ 86; fig. 8, ref. 814), the performance parameter corresponding to a performance resource ('898, page 5, ¶ 57);

reserving the performance resource for a grid computing operation ('898, page 5, ¶ 58; page 8, ¶ 86; fig. 8, ref. 814);

terminating the reservation of the performance resource in response to a client reclamation operation ('898, page 7, ¶ 83; fig. 9, ref. 910), the client reclamation operation reclaiming the performance resource and making the performance resource unavailable to the grid computing system ('898, page 8, ¶ 88);

reserving another performance resource for the grid computing operation, wherein the other performance resource similar to is the same type of performance resource as the reclaimed performance resource ('898, page 5, ¶ 58; page 8, ¶ 86; fig. 8, ref. 814);

storing a network profile, the network profile comprising a network performance parameter of a network performance resource available to the grid computing system ('898, page 4, ¶ 46);

storing a global client profile in a memory device, the global client profile descriptive of a global client performance resource parameter ('898, page 4, ¶ 46, 49);

storing a plurality of client profiles, each of the plurality of client profiles comprising a client performance parameter of a client performance resource available to the grid computing system ('898, page 4, ¶ 46; page 5, ¶ 54); and

synchronizing one of the stored client profiles with a local client profile stored on a client ('898, page 5, ¶ 59).

Claim 26 presents a computer readable storage medium comprising computer readable code configured to carry out a method for user control of a system resource on a grid computing system. The method includes allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter of the grid computing system ('898,

page 5, ¶ 56; page 7, ¶ 83; fig. 8, ref. 806);.

The method further includes dynamically changing the performance parameter according to the parameter control request ('898, page 5, ¶ 57; page 8, ¶ 86; fig. 8, ref. 814). The performance parameter corresponds to a performance resource ('898, page 5, ¶ 57). In addition, the method includes reserving the performance resource for a grid computing operation ('898, page 5, ¶ 58; page 8, ¶ 86; fig. 8, ref. 814).

The following quotation of claim 26 includes reference numerals and parenthetical references to representative examples of the elements and components recited in claim 26 in compliance with 37 CFR 41.37(c)(1)(v).

26 A computer readable storage medium comprising computer readable code configured to carry out a method for user control of a system resource on a grid computing system, the method comprising:

- allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter of the grid computing system ('898, page 5, ¶ 56; page 7, ¶ 83; fig. 8, ref. 806);

- dynamically changing the performance parameter according to the parameter control request ('898, page 5, ¶ 57; page 8, ¶ 86; fig. 8, ref. 814), the performance parameter corresponding to a performance resource ('898, page 5, ¶ 57); and

- reserving the performance resource for a grid computing operation ('898, page 5, ¶ 58; page 8, ¶ 86; fig. 8, ref. 814).

Claim 37 presents an apparatus for user control of a system resource on a grid computing system. The apparatus includes means for allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter of the grid computing system ('898, page 4, ¶ 44; page 5, ¶ 56; page 7, ¶ 83; fig. 3, ref. 300; fig. 8, ref. 806).

In addition, the apparatus includes means for dynamically changing the performance parameter according to the parameter control request ('898, page 5, ¶ 57; page 8, ¶ 86; fig. 3, ref.

324; fig. 8, ref. 814). The performance parameter corresponds to a performance resource. The apparatus further includes means for reserving the performance resource for a grid computing operation ('898, page 5, ¶ 58; page 8, ¶ 86; fig. 3, ref. 326; fig. 8, ref. 814).

The following quotation of claim 37 includes reference numerals and parenthetical references to representative examples of the elements and components recited in claim 37 in compliance with 37 CFR 41.37(c)(1)(v).

37 An apparatus for user control of a system resource on a grid computing system, the apparatus comprising:

means for allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter of the grid computing system ('898, page 4, ¶ 44; page 5, ¶ 56; page 7, ¶ 83; fig. 3, ref. 300; fig. 8, ref. 806);

means for dynamically changing the performance parameter according to the parameter control request ('898, page 5, ¶ 57; page 8, ¶ 86; fig. 3, ref. 324; fig. 8, ref. 814), the performance parameter corresponding to a performance resource; and

means for reserving the performance resource for a grid computing operation ('898, page 5, ¶ 58; page 8, ¶ 86; fig. 3, ref. 326; fig. 8, ref. 814).

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

I. Whether the Examiner properly rejected claims 1-5, 8-10, 19, 22, 23, 26-28, 31-33, and 37 under 35 U.S.C. §102(e) as anticipated by Talwar?

II. Whether the Examiner properly rejected claims 11, 14, 15, 17, 18, and 34 under 35 U.S.C. §103(a) as obvious in view of Talwar and Bartlett?

III. Whether the Examiner properly rejected claims 6, 7, 12, 13, 20, 21, 24, 29, 30, 35, and 36 under 35 U.S.C. §103(a) as obvious in view of Talwar and Lumelsky?

IV. Whether the Examiner properly rejected claims 16 and 25 under 35 U.S.C. §103(a) as obvious in view of Talwar, Bartlett, and Lumelsky?

7. ARGUMENT

I. The rejection of claims 1-5, 8-10, 19, 22, 23, 26-28, 31-33, and 37 under 35 U.S.C. §102(e) as anticipated by Talwar is improper because Talwar fails to teach each element of the recited claims.

Summary of the Examiner arguments.

[001] The Examiner rejects claims 1-5, 8-10, 19, 22, 23, 26-28, 31-33, and 37 under 35 U.S.C. § 102(e) as being anticipated by Talwar. The Examiner relies on Talwar for inputting a parameter control request, the parameter control request corresponding to a performance parameter stored in a profile and dynamically changing the performance parameter according to the parameter control request. In OA080130 and AA080430, the Examiner indicates that the Appellant's arguments are unpersuasive. The Examiner then responds to the Appellant's arguments.

Response.

[002] Appellant respectfully reaffirms the arguments raised against the rejection of claims 1-5, 8-10, 19, 22, 23, 26-28, 31-33, and 37 under 35 USC § 102(e) set forth in the response mailed March 31, 2008.

The legal requirements

[003] "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). For a *prima facie* case of anticipation, each and every element of the claimed invention must be identically disclosed in a single prior art reference; and those elements must be arranged or connected together in a single reference in the same way as specified in the patent claim. *Lindemenn Maschinenfabrik GmbH vs. American Hoist and Derick Co.*, 730 F2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984).

Claim 1

[004] Claim 1 recites:

I. A global on-demand management apparatus for user control of a system resource on a grid computing system, the apparatus comprising:

a global user input module configured to **allow a user to input a parameter control request, the parameter control request corresponding to a performance parameter stored in a profile** in a memory device of the grid computing system;

a global parameter module configured to **dynamically change the performance parameter according to the parameter control request**, the performance parameter corresponding to a performance resource; and

a global reservation module configured to reserve the performance resource for a grid computing operation.

[005] Appellant maintains the position that Talwar does not teach or disclose each element of claim 1. Claim 1 is representative of the other rejected independent claims 19, 22, 26, and 37.

[006] Claim 1 includes the limitation "...allow a user to input a parameter control request, the parameter control request corresponding to a performance parameter stored in a profile..." The Examiner argues that Talwar's teaching of a user submitting requests for interactive sessions to a distributed resource management (DRM) node, the interactive sessions subject to service level agreements (SLA), the DRM node receiving input from one or more policies, application profile repositories, and an information service, the information service storing information about resources in the grid computing system discloses **allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter stored in a profile**. OA080130, page 3, line 21 – page 4, line 2; AA080430, page 3, lines 15-21; citing Talwar, page 1, ¶ 12; page 2, ¶ 16.

[007] Appellant respectfully disagrees. Talwar clearly teaches that the user initiates an interactive session to contract for grid computing system resources rather than inputting a performance parameter as recited in claim 1. Talwar, page 2, ¶ 16. In addition, contrary to the Examiner's assertion, it is unreasonable to interpret "the parameter control request" and "performance parameter" as "user's job request" and "the service level agreement (SLA)."

AA080430, page 3, lines 18-21. The interactive session request and the application request described in Talwar are not parameter control requests, within the context of the claim *as a whole*.

[008] OA080130 and AA080430 attempt to redefine the scope of the terms “parameter control request” and “performance parameter.” Appellant respectfully submits that the proposed interpretation fails to appreciate the context of the claim, as a whole. In particular, OA080130 suggests that a parameter control request may be “any type of request submit by an end-user.” OA080130, page 20, lines 8-9. OA080130 proposes this interpretation as being reasonable because the indicated term is not explicitly defined in the present claim language. OA080130, page 20, lines 4-8. While the claim language may not include an explicit definition of the term “parameter control request,” the Examiner’s argument fails to acknowledge the context provided in the claim for the indicated limitation. Specifically, the claim recites the parameter control request corresponds to a performance parameter stored in a profile in a memory device of a grid computing system. Although OA080130 attempts to interpret the claimed parameter control request as “any type of request” submitted by an end-user, OA080130 fails to provide any support to show how “any type of request” submitted by an end-user might correspond to a performance parameter stored in a profile. Therefore Talwar does not disclose the element of “...allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter stored in a profile...”

[009] Claim 1 further includes the limitation “...dynamically change the performance parameter according to the parameter control request...” The Examiner cites Talwar’s teaching of dynamically generating available resources for a client based on a client request as disclosing **dynamically changing the performance parameter according to the parameter control request**. OA080130, page 4, lines 3-8; citing Talwar, page 2, ¶ 16-17; page 3, ¶ 28.

[010] Appellant respectfully disagrees. As discussed above, Talwar is directed to contracting for grid computing resources in an interactive session. Talwar, page 2, ¶ 16. The Examiner’s proposed interpretation of a parameter control request as “any type of request” submitted by a user fails to appreciate the context of the claim, as a whole, because the proposed interpretation does not effectuate a dynamic change of a performance parameter. Talwar describes using a service level agreement (SLA) to specify CPU and network bandwidth

requirements for a session. Talwar, page 2, ¶ 20. However, Talwar does not disclose dynamically changing the CPU and network bandwidth requirements in response to a parameter control request or another type of request.

[011] Thus, even though Talwar appears to describe accessing an application profile to determine the CPU and bandwidth requirements for a particular session, Talwar does not describe dynamically changing the CPU and bandwidth requirements, or any other type of requirements, in response to a parameter control request. Appellant submits that Talwar does not disclose dynamically changing performance parameters according to a parameter control request as discussed above. Therefore Talwar does not teach each element of claim 1.

[012] Claims 19, 22, 26, and 37 include the limitation of allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter stored in a profile discussed above in relation to claim 1. Therefore, claims 19, 22, 26, and 37 are also allowable. Claim 2-5, 8-10, 23, 27, 28, 31-33 depend from claims 1, 22, and 26 and are allowable for at least the same reasons as the independent claims.

II. The rejection of claims 11, 14, 15, 17, 18, and 34 under 35 U.S.C. §103(a) as obvious in view of Talwar and Bartlett is improper because Talwar and Bartlett fail to teach each element of the recited claims.

Summary of the Examiner arguments.

[001] The Examiner rejects claims 11, 14, 15, 17, 18, and 34 under 35 U.S.C. § 103(a) as being unpatentable over Talwar in view of Bartlett. The Examiner relies on Talwar for inputting a client parameter control request and synchronizing the client performance request with client profiles. In OA080130 and AA080430, the Examiner indicates that the Appellant arguments are unpersuasive. The Examiner then responds to the Appellant arguments.

Response

[013] Appellant respectfully reaffirm the arguments raised against the rejection of claims 11, 14, 15, 17, 18, and 34 under 35 USC §103(a) set forth in the response mailed March 31, 2008.

The legal requirements

It is well settled that the PTO has the burden to establish a *prima facie* case of obviousness. *In re Glaug*, 2002 U.S. App. Lexis 4246, *4 (Fed. Cir. March 15, 2002); MPEP §2142. “To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” MPEP §2143.03.

The four factual inquiries for determining obviousness are as follows:

- (A) Determining the scope and contents of the prior art;
- (B) Ascertaining the differences between the prior art and the claims in issue;
- (C) Resolving the level of ordinary skill in the pertinent art; and
- (D) Evaluating evidence of secondary considerations. MPEP § 2141 I.

Claim 14

[014] Claim 14 recites:

14. A local on-demand management apparatus for user control of a system resource on a grid computing system, the apparatus comprising:

a client user input module configured to **allow a user to input a client parameter control request, the parameter control request corresponding to a client performance parameter of the grid computing system**, the client performance parameter corresponding to a client performance resource;

a client allocation module configured to allocate the client performance resource to the grid computing system;

a client profile management module configured to store a client profile in a memory device, the client profile comprising the client performance parameter of the client performance resource allocated to the grid computing system; and

a client profile synchronization module configured to **synchronize the client performance parameter with one of a plurality of client profiles** stored on a global on-demand apparatus.

[015] Appellant maintains the position that Talwar and Bartlett do not teach or disclose each element of claim 14. Claim 14 includes the limitation “...allow a user to input a client parameter control request, the parameter control request corresponding to a client performance parameter of the grid computing system ...” The Examiner argues that Talwar’s teaching of a user submitting requests for interactive sessions to a distributed resource management (DRM)

node with a list of desired applications/resources to interact with discloses **allowing a user to input a client parameter control request, the parameter control request corresponding to a client performance parameter of the grid computing system.** OA080130, page 14, lines 6-12; citing Talwar, page 2, ¶ 16; page 3, ¶ 28.

[016] Appellant respectfully disagrees. Appellant reiterates the arguments above of paragraphs 7-8 that Talwar clearly teaches that the user initiates an interactive session to contract for grid computing system resources rather than inputting a client performance parameter as recited in claim 14. The interactive session request and the application request described in Talwar are not client parameter control requests, within the context of the claim as a whole. Therefore the combination of Talwar and Bartlett do not teach each element of claim 14.

[017] Claim 14 further includes the limitation "...synchronize the client performance parameter with one of a plurality of client profiles..." The Examiner cites Bartlett's teaching of synchronizing client profiles and plug-ins between a remote device and a server as disclosing **synchronizing the client performance parameter with one of a plurality of client profiles.** OA080130, page 15, lines 1-2. Appellant respectfully disagrees. The client profiles and plug-ins of Bartlett are clearly not equivalent to the client performance parameter of claim 14. Appellant therefore submits that the combination of Talwar and Bartlett do not teach each element of claim 14.

[018] Claims 11, 15, 17, 18, and 34 depend from claims 1, 14, and 26 and are allowable for at least the same reasons as the independent claims as discussed here and above.

III. The rejection of claims 6, 7, 12, 13, 20, 21, 24, 29, 30, 35, and 36 under 35 U.S.C. §103(a) as obvious in view of Talwar and Lumelsky is improper because Talwar and Lumelsky fail to teach each element of the recited claims.

Summary of the Examiner arguments.

[019] The Examiner rejects claims 6, 7, 12, 13, 20, 21, 24, 29, 30, 35, and 36 under 35 U.S.C. § 103(a) as being unpatentable over Talwar in view of Lumelsky. In OA080130 and

AA080430, the Examiner indicates that the Appellant arguments are unpersuasive. The Examiner then responds to the Appellant arguments.

Response

[020] Appellant respectfully reaffirm that claims 6, 7, 12, 13, 20, 21, 24, 29, 30, 35, and 36 are allowable under 35 USC §103(a) as depending from allowable claims.

IV. The rejection of claims 16 and 25 under 35 U.S.C. §103(a) as obvious in view of Talwar, Bartlett, and Lumelsky is improper because Talwar, Bartlett, and Lumelsky fail to teach each element of the recited claims.

Summary of the Examiner arguments.

[021] The Examiner rejects claims 16 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Talwar in view of Bartlett and Lumelsky. The Examiner relies on Talwar for inputting a parameter control request, the parameter control request corresponding to a performance parameter stored in a profile and dynamically changing the performance parameter according to the parameter control request. In OA080130 and AA080430, the Examiner indicates that the Appellant arguments are unpersuasive. The Examiner then responds to the Appellant arguments.

Response

[022] Appellant respectfully reaffirm the arguments that claims 16 and 25 under 35 USC §103(a) set forth in the response mailed March 31, 2008.

The legal requirements

It is well settled that the PTO has the burden to establish a *prima facie* case of obviousness. *In re Glaug*, 2002 U.S. App. Lexis 4246, *4 (Fed. Cir. March 15, 2002); MPEP §2142. “To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” MPEP §2143.03.

The four factual inquiries for determining obviousness are as follows:

- (A) Determining the scope and contents of the prior art;
- (B) Ascertaining the differences between the prior art and the claims in issue;

- (C) Resolving the level of ordinary skill in the pertinent art; and
- (D) Evaluating evidence of secondary considerations. MPEP § 2141 I.

Claim 25

[023] Claim 25 recites:

25. A method for user control of a system resource on a grid computing system, the method comprising:

- allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter** of the grid computing system;

- dynamically changing the performance parameter according to the parameter control request**, the performance parameter corresponding to a performance resource;

- reserving the performance resource for a grid computing operation;

- terminating the reservation of the performance resource in response to a client reclamation operation, the client reclamation operation reclaiming the performance resource and making the performance resource unavailable to the grid computing system;

- reserving another performance resource for the grid computing operation, wherein the other performance resource similar to is the same type of performance resource as the reclaimed performance resource;

- storing a network profile, the network profile comprising a network performance parameter of a network performance resource available to the grid computing system;

- storing a global client profile in a memory device, the global client profile descriptive of a global client performance resource parameter;

- storing a plurality of client profiles, each of the plurality of client profiles comprising a client performance parameter of a client performance resource available to the grid computing system; and

- synchronizing one of the stored client profiles with a local client profile stored on a client.

[024] Appellant maintain the position that Talwar, Bartlett, and Lumelsky do not teach or disclose each element of claim 25. Claim 25 includes the limitation “...allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter ...” The Examiner argues that Talwar’s teaching of a user submitting requests for

interactive sessions and specifying a list of desired applications and resources as disclosing **allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter stored in a profile.** OA080130, page 17, lines 3-7; citing Talwar, page 2, ¶ 16; page 3, ¶ 28.

[025] Appellant respectfully disagrees. As discussed above in paragraphs 7-8, it is unreasonable to interpret “the parameter control request” and “performance parameter” as “user’s job request” and “the service level agreement (SLA).” The interactive session request and the application request described in Talwar are not parameter control requests, within the context of the claim *as a whole*. Appellant therefore submits that Talwar does not disclose “...allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter stored in a profile...”

[026] Claim 25 further includes the limitation “...dynamically changing the performance parameter according to the parameter control request ...” The Examiner cites Talwar’s teaching of dynamically generating available resources for a client based on a client request as disclosing **dynamically changing the performance parameter according to the parameter control request.** OA080130, page 17, lines 8-11; citing Talwar, page 3, ¶ 27-28.

[027] Appellant respectfully disagrees. As discussed in paragraphs 9-11, Talwar is directed to contracting for grid computing resources in an interactive session. Talwar does not disclose dynamically changing performance parameters according to a parameter control request as discussed above.

[028] Therefore Talwar does not teach each element of claim 25 and Appellant submits that claim 25 is allowable. Claim 16 depends from allowable claim 14 as discussed above and is allowable for at least the same reasons as the independent claim 14 as discussed above.

SUMMARY

In view of the foregoing, Appellant respectfully assert that each of the claims on appeal has been improperly rejected because the rejections under 35 U.S.C. § 102(e) and §103(a) are improper. Therefore, Appellant respectfully request reversal of the Examiner's rejections under 35 U.S.C. § 102(e) and §103(a), and urges that pending claims 1-37 are ready for prompt allowance. Appellant appeal to the Board's objective and reasoned decision on this matter.

Respectfully submitted,

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8. CLAIMS APPENDIX

The claims involved in the appeal, namely claims 1-37, are listed below.

1. A global on-demand management apparatus for user control of a system resource on a grid computing system, the apparatus comprising:
 - a global user input module configured to allow a user to input a parameter control request, the parameter control request corresponding to a performance parameter stored in a profile in a memory device of the grid computing system;
 - a global parameter module configured to dynamically change the performance parameter according to the parameter control request, the performance parameter corresponding to a performance resource; and
 - a global reservation module configured to reserve the performance resource for a grid computing operation.
2. The apparatus of claim 1, wherein the performance parameter is a network performance parameter.
3. The apparatus of claim 2, wherein the network performance parameter is one of network accessibility, network bandwidth allocation, and grid allocation hierarchy.
4. The apparatus of claim 1, wherein the performance parameter is a client performance parameter.
5. The apparatus of claim 4, wherein the client performance parameter is one of client accessibility, client bandwidth allocation, processor allocation, storage allocation, memory allocation, backup recoverability, and backup proximity.
6. The apparatus of claim 1, wherein the global reservation module is further configured to terminate the reservation of the performance resource in response to a client reclamation operation, the client reclamation operation reclaiming the performance resource and making the performance resource unavailable to the grid computing system.

7. The apparatus of claim 6, wherein the global reservation module is further configured to reserve another performance resource for the grid computing operation, wherein the other performance resource similar to is the same type of performance resource as the reclaimed performance resource.
8. The apparatus of claim 1, further comprising a global profile management module configured to store a network profile, the network profile comprising a network performance parameter of a network performance resource available to the grid computing system.
9. The apparatus of claim 1, further comprising a global profile management module configured to store a global client profile, the global client profile descriptive of a global client performance resource parameter.
10. The apparatus of claim 1, further comprising a global profile management module configured to store a plurality of client profiles, each of the plurality of client profiles comprising a client performance parameter of a client performance resource available to the grid computing system.
11. The apparatus of claim 10, further comprising a global profile synchronization module configured to synchronize one of the stored client profiles with a local client profile stored on a client.
12. The apparatus of claim 1, further comprising a global profile management module configured to store a plurality of profile histories, each of the plurality of profile histories comprising a history of a performance parameter resource.
13. The apparatus of claim 12, wherein the global profile management module is further configured to communicate one of the plurality of profile histories to a subscription manager, the

subscription manager configured to calculate a client subscription fee based at least in part on the one of the plurality of profile histories.

14. A local on-demand management apparatus for user control of a system resource on a grid computing system, the apparatus comprising:

a client user input module configured to allow a user to input a client parameter control request, the parameter control request corresponding to a client performance parameter of the grid computing system, the client performance parameter corresponding to a client performance resource;

a client allocation module configured to allocate the client performance resource to the grid computing system;

a client profile management module configured to store a client profile in a memory device, the client profile comprising the client performance parameter of the client performance resource allocated to the grid computing system; and

a client profile synchronization module configured to synchronize the client performance parameter with one of a plurality of client profiles stored on a global on-demand apparatus.

15. The apparatus of claim 14, further comprising a client parameter module configured to dynamically change the client performance parameter according to the client parameter control request.

16. The apparatus of claim 14, further comprising a client reclamation module configured to reclaim the client performance resource and make the client performance resource unavailable to the grid computing system in response to a client reclamation operation.

17. The apparatus of claim 14, wherein the client user input module receives the client parameter control request from the global on-demand apparatus.

18. The apparatus of claim 14, wherein the client performance parameter is one of client accessibility, client bandwidth allocation, processor allocation, storage allocation, memory allocation, backup recoverability, and backup proximity.

19. A system for user control of a system resource on a grid computing system, the system comprising:

- a local on-demand management apparatus connected to the grid computing system, the local on-demand apparatus having local access to and control of a performance resource;

- a global on-demand management apparatus connected to the grid computing system, the global on-demand apparatus configured to communicate with the local on-demand apparatus;

- a user input module configured to allow a user to input a parameter control request, the parameter control request corresponding to the performance resource, wherein the performance resource corresponds to a performance parameter stored in a profile in a memory device of the grid computing system;

- an allocation module configured to allocate the performance resource to the grid computing system; and

- a reservation module configured to reserve the performance resource for a grid computing operation.

20. The system of claim 19, further comprising a subscription manager configured to determine a user fee associated with the local on-demand management apparatus, the user fee based at least in part on the allocation of the performance resource to the grid computing system.

21. The system of claim 19, further comprising a subscription manager configured to manage the allocated performance resource and to control the level of service available to the local on-demand management apparatus, the level of service based at least in part on the allocation of the performance resource to the grid computing system.

22. A method for user control of a system resource on a grid computing system, the method comprising:

allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter stored in a profile in a memory device of the grid computing system;

dynamically changing the performance parameter according to the parameter control request, the performance parameter corresponding to a performance resource; and
reserving the performance resource for a grid computing operation.

23. The method of claim 22, further comprising storing a profile, the profile comprising the performance parameter of the network performance resource available to the grid computing system, wherein the profile is one of a network profile, a global client profile, and a client profile.

24. The method of claim 22, wherein the method further comprises terminating the reservation of the performance resource in response to a client reclamation operation, the client reclamation operation reclaiming the performance resource and making the performance resource unavailable to the grid computing system.

25. A method for user control of a system resource on a grid computing system, the method comprising:

allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter of the grid computing system;

dynamically changing the performance parameter according to the parameter control request, the performance parameter corresponding to a performance resource;

reserving the performance resource for a grid computing operation;

terminating the reservation of the performance resource in response to a client reclamation operation, the client reclamation operation reclaiming the performance resource and making the performance resource unavailable to the grid computing system;

reserving another performance resource for the grid computing operation, wherein the other performance resource similar to is the same type of performance resource as the reclaimed performance resource;

storing a network profile, the network profile comprising a network performance parameter of a network performance resource available to the grid computing system;

storing a global client profile in a memory device, the global client profile descriptive of a global client performance resource parameter;

storing a plurality of client profiles, each of the plurality of client profiles comprising a client performance parameter of a client performance resource available to the grid computing system; and

synchronizing one of the stored client profiles with a local client profile stored on a client.

26. A computer readable storage medium comprising computer readable code configured to carry out a method for user control of a system resource on a grid computing system, the method comprising:

allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter of the grid computing system;

dynamically changing the performance parameter according to the parameter control request, the performance parameter corresponding to a performance resource; and

reserving the performance resource for a grid computing operation.

27. The computer readable storage medium of claim 26, wherein the performance parameter is one of network accessibility, network bandwidth allocation, and grid allocation hierarchy.

28. The computer readable storage medium of claim 26, wherein the performance parameter is one of client accessibility, client bandwidth allocation, processor allocation, storage allocation, memory allocation, backup recoverability, and backup proximity.

29. The computer readable storage medium of claim 26, wherein the method further comprises terminating the reservation of the performance resource in response to a client reclamation operation, the client reclamation operation reclaiming the performance resource and making the performance resource unavailable to the grid computing system.

30. The computer readable storage medium of claim 26, wherein the method further comprises reserving another performance resource for the grid computing operation, wherein the other performance resource similar to is the same type of performance resource as the reclaimed performance resource.
31. The computer readable storage medium of claim 26, wherein the method further comprises storing a network profile, the network profile comprising a network performance parameter of a network performance resource available to the grid computing system.
32. The computer readable storage medium of claim 26, wherein the method further comprises storing a global client profile, the global client profile descriptive of a global client performance resource parameter.
33. The computer readable storage medium of claim 26, wherein the method further comprises storing a plurality of client profiles, each of the plurality of client profiles comprising a client performance parameter of a client performance resource available to the grid computing system.
34. The computer readable storage medium of claim 26, wherein the method further comprises synchronizing one of the stored client profiles with a local client profile stored on a client.
35. The computer readable storage medium of claim 26, wherein the method further comprises storing a plurality of profile histories, each of the plurality of profile histories comprising a history of a performance parameter resource.
36. The computer readable storage medium of claim 35, wherein the method further comprises communicating one of the plurality of profile histories to a subscription manager, the subscription manager configured to calculate a client subscription fee based at least in part on the one of the plurality of profile histories.

37. An apparatus for user control of a system resource on a grid computing system, the apparatus comprising:

means for allowing a user to input a parameter control request, the parameter control request corresponding to a performance parameter of the grid computing system;

means for dynamically changing the performance parameter according to the parameter control request, the performance parameter corresponding to a performance resource; and

means for reserving the performance resource for a grid computing operation.

9. EVIDENCE APPENDIX

There is no material to be included in the Evidence Appendix.

10. RELATED PROCEEDINGS APPENDIX

There is no material to be included in the Related Proceedings Appendix.